



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/715,116

11/18/2003

Arno Jan Bleeker

081468-0306527

3978

909

7590

03/17/2005

PILLSBURY WINTHROP, LLP

P.O. BOX 10500

MCLEAN, VA 22102

EXAMINER

FULLER, RODNEY EVAN

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 03/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/715,116

Applicant(s)

BLEEKER, ARNO JAN

Examiner

Rodney E. Fuller

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 11-19, 26-33 and 38-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 5-10, 20-25 and 34-37 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

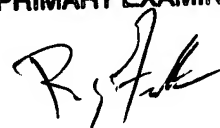
- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

RODNEY FULLER  
PRIMARY EXAMINER

**Attachment(s)**

- |                                                                                                                                                                |                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                                                               | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                                           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/1/05 ; 2/20/04 ; 11/18/03</u> | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed November 18, 2003 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. On page 3 of 3 of the IDS, only the references initialed have been considered. Specifically, copies of references MMN, NNN, OOO, PPP and QQQ were not provided and have not been considered.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 11-19, 26-33 and 38-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Hesse (DD 224 448 A1).

Regarding claims 1, 16 and 31, Hesse discloses “a support configured to hold a patterning device, the patterning device configured to pattern a beam of radiation according to a desired pattern; a substrate table configured to hold a substrate (Fig. 1, ref.# 7; a projection system (Fig. 1, ref.# 1) configured to project the patterned beam onto a target portion of the substrate (Fig. 1, ref.# 7); a liquid supply system configured

Art Unit: 2851

to at least partly fill a space (Fig. 1, ref.# 14) between said projection system (Fig. 1, ref.# 1) and said substrate (Fig. 1, ref.# 7), with a liquid through which said beam is to be projected; and an isolator (Fig. 1, ref.# 9), having at least a portion to allow passage of said beam therethrough, provided between said projection system and said substrate table and mechanically isolated from said projection system."

Note: Hesse is related in general to a photolithography system that exposes a pattern on a photosensitive layer (See English abstract), and therefore would inherently include "a support configured to hold a patterning device", wherein "the patterning device" is "configured to pattern a beam of radiation according to a desired pattern."

Regarding claims 2, 17 and 32, Hesse discloses "wherein said isolator comprises a transparent plate." (Fig. 1, ref.# 9, page 4, last line "parallelen Glasplatte" and English abstract)

Regarding claims 3, 18 and 33, Hesse discloses "wherein said portion is transparent and has a refractive index at the wavelength of said beam substantially the same as the refractive index of the liquid at that wavelength." (Fig. 1, ref.# 9, page 4, last line "parallelen Glasplatte" and English abstract)

Regarding claims 4 and 19, Hesse discloses "wherein said isolator is so shaped and positioned that a first liquid part (Fig. 1, ref.# 14) is maintained between the projection system (Fig. 1, ref.# 1) and the isolator (Fig. 1, ref.# 9) and a second liquid part (Fig. 1, ref.# 10) is maintained between the isolator and the substrate table (Fig. 1, ref.# 11), and with no liquid communication between the first and second liquid parts."

Regarding claims 12, 27 and 39, Hesse discloses "wherein said isolator (Fig. 1, ref.# 9) is connected to a base frame of the apparatus (Fig. 1, ref.#s 6, 11)."

Regarding claims 13, 28 and 40, Hesse discloses "wherein said projection system (Fig. 1, ref.# 1) is connected to a reference frame (Fig. 1, hatched structure near reference numeral 3) which is isolated from the base frame (Fig. 1, ref.# 11)."

Regarding claims 15 and 30, Hesse discloses "wherein said liquid supply system is configured to provide a first liquid portion (Fig. 1, ref.# 10) through which the patterned beam can be projected, said substrate (Fig. 1, ref.# 7) capable of imparting a vibration in said first liquid portion (Fig. 1, ref.# 10) and to provide a second liquid portion (Fig. 1, ref.# 14) through which the patterned beam can be projected, said second liquid portion being in contact with said projection system (Fig. 1, ref.# 1) and said isolator (Fig. 1, ref.# 9) is disposed between said first and second liquid portions to inhibit a vibration in said first liquid portion from being transmitted to said second liquid portion."

***Allowable Subject Matter***

4. Claims 5-10, 20-25 and 34-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not teach "a position sensor configured to measure the position of the isolator relative to the projector and an actuator coupled to said position sensor."

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney E. Fuller whose telephone number is 571-272-2118. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rodney E Fuller  
Primary Examiner  
Art Unit 2851



March 10, 2005